NOAA's National Marine Fisheries Service Protected Resources Science Investment and Planning Process (PRSIPP): Highlights and Significant Outcomes of the September 2013 Steering Committee Meeting

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Penny S. Pritzker, Secretary

National Oceanic and Atmospheric Administration
Kathryn D. Sullivan, Administrator

National Marine Fisheries Service
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Background

The Protected Resources Science Investment and Planning Process (PRSIPP) is a Line Office-(National Marine Fisheries Service, NMFS) level initiative designed to increase funding and infrastructure for meeting protected species science needs through improved coordination and leveraging of existing resources, both within, and external to NMFS, and to increase the degree to which existing internal and external resources are used to fulfill agency science needs. The initiative recognizes that there is an increased demand for protected species science to address petitions, consultations, and other urgent management and regulatory needs, and it seeks to build a "growth industry"-type investment in that science to ensure that the country's priority defense and economic goals are achieved while sustaining viable wild populations of protected species. This investment will be secured through a process-oriented approach, whereby science needs of "consumers" are identified and prioritized, and the science conducted includes attention to how well that science has met the needs initially identified by science users (Figure 1).

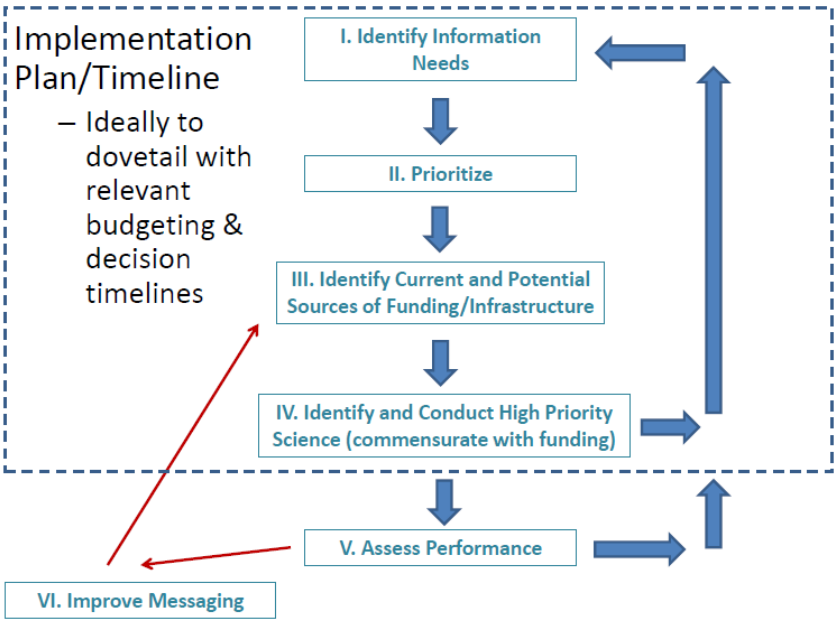

Figure 1. The Protected Resources Science Investment and Planning Process (PRSIPP).

The PRSIPP audience includes a broad range of science user groups. Among those targeted are the NMFS regional offices (ROs), science centers (SCs), Headquarters Offices of Science and Technology (S&T) and Protected Resources (PR), the NMFS Science Board and Leadership Council, additional National Oceanic and Atmospheric Administration (NOAA) Line Offices, and other Federal Government agencies. The process is deliberately designed to be scalable to all protected species under NMFS jurisdiction and to occur at multiple scales in space (within NMFS at regional and national levels, and, for example, across multiple Federal Government agencies) and time (annually and longer, corresponding to the budget cycle timelines and science needs of NMFS and other science user groups).

The PRSIPP is envisioned to have multiple benefits, among them: improved communication within the agency at multiple levels, greater consistency with respect to how the NMFS science centers engage with consumers of their science, more effective pairing between the science conducted and the science needed, increased transparency with respect to why particular science is conducted, and enhanced collaboration and complementarity between the NMFS science centers and all users of that science. It is hoped that, ultimately, the most significant benefit of the PRSIPP will be an increased investment in the protected species science required by science consumers, so as to ensure that the country's priority defense and economic goals are achieved while sustaining viable wild populations of protected species.

A meeting of the PRSIPP Steering Committee, NMFS Leadership, and some key external Federal Government partners (Appendix 1) was conducted 24-27 September, 2013, in Washington, D.C. The meeting agenda is provided in Appendix 2.

Meeting Highlights and Significant Outcomes

Element I of the PRSIPP

Much of the meeting focused on Element I of the PRSIPP: "Identify Information Needs." Element I seeks to identify protected species science needs in a manner that is consistent among science centers, both when interacting with their respective ROs and Headquarters, as well as with other Federal Government agencies. Although Element I targets all users of protected species science, the PRSIPP Steering Committee agreed to restrict the focus of the meeting primarily to users within NMFS. Accordingly, prior to the meeting, each of the PRSIPP Steering Committee members from the six SCs communicated with their respective ROs with a goal of gaining a general understanding of protected species science needs by the latter. A template was designed to facilitate information gathering and to somewhat standardize the process. Completed templates were forwarded to PRSIPP Steering Committee members of S&T for compilation at the National level.

The conceptual approach of Element I is to identify the universe of protected species science needs. Therefore, the dialog between SCs and ROs was not restricted with respect to taxa, geographic region, or mandate. Science needs that are ongoing and currently met (wholly or in-part), as well as those that are currently unmet were included, as were science needs based on the perspective of each SC. Finally, because science needs may fall outside of the scope of responsibilities of the PRSIPP science center Steering Committee Members (whose expertise is largely focused on mammals, turtles, and, to a lesser extent, salmon), they were encouraged to communicate with their SC colleagues, if applicable, to make them aware of this process and the preliminary results. While the conceptual approach of identifying all protected species science needs was acknowledged, the Steering Committee also recognized and accepted that the list

obtained for the meeting would not be comprehensive, and agreed that, in addition to identifying some protected species science needs, the Element I process would also be a valuable heuristic exercise.

Each of the six SC Steering Committee members presented results of this exercise at the meeting. The Protected Resources Assistant Regional Administrators (ARAs) from respective ROs were encouraged to participate (via phone and webinar). Subsequent to these presentations, Steering Committee members from S&T presented results of the national-level compilation. Finally, the PRSIPP Steering Committee member from PR presented ideas regarding how the science needs of this office could be included. Two themes were the focus of presentations and subsequent discussion: 1) Results (What are our science needs?); and 2) Process (How can the process of identifying science needs be improved?)

Two themes were common to many regions and were evident at the national level:

1) Science needs often encompassed what the SCs characterized as "core" activities.
2) Although the science needs identified in this exercise tended toward the "urgent" and "immediate", ROs widely acknowledged that long-term data sets provide critical information to address these urgent needs, and are therefore of high priority for support.

Significant points regarding the Element I process included the following:

1) The PRSIPP was initially envisioned as an annual process, and Steering Committee members agreed that this was appropriate at the regional level. National-level compilation and involvement of external Federal Government partners should occur at longer time cycles (see recommendations from NMFS Leadership below).
2) ROs provided a wide range of granularity with respect to the science/information needs required. Steering Committee members ultimately agreed that, for a variety of reasons, finer granularity was preferred.
3) PR and S&T agreed that the most effective mechanism for incorporating science needs of the former would be direct communication between the two offices subsequent to compilation of the National list, with revisions to be made based on these communications.
4) There was broad consensus that a nationally-compiled list of science needs was valuable, for a wide variety of reasons. Potential uses include providing a basis for development of long-term funding initiatives, and for making decisions regarding short-term funding opportunities.

The presentations and associated discussion resulted in post-meeting effort at the regional and national levels to revise compiled lists of science needs in a manner that was more consistent across regions. To facilitate this, the information template was revised, and major science themes were identified (Appendix 3). The need for iterative communication between SCs and ROs was

stressed and a preliminary and partial list of science needs will be produced in calendar year 2014.

Meeting with Select External Federal Government Partners

Although the primary focus of this meeting was internal to NMFS, one morning session was devoted to informal discussion with representatives of three key NMFS Federal Government partners (listed in Appendix 1): Department of Navy, Bureau of Ocean and Energy Management (BOEM), and Department of Energy (DOE). An overview of the PRSIPP was provided, followed by a request for comments, initially sparked by a set of trigger questions (listed in Appendix 2). General themes arising from this discussion included the following:

1) There was clear consensus that the national-level initiative represented by the PRSIPP was a welcome effort, especially with respect to the goal of bringing consistency across NMFS regions with respect to communications about and implementation of protected species science.
2) Representatives from all three agencies voiced strong interest in gaining an improved understanding of, and consistency with respect to, the science required to address regulatory requirements of NMFS. In particular, these representatives promoted the development and communication of clear standards by NMFS as a productive mechanism to strengthen inter-agency collaborations. The idea of a series of workshops on "best practices" was floated as a potential process to achieve this goal.
3) Long-term data sets, referred to as "baseline" data, were widely embraced as providing among the most essential information required by all three external-to-NMFS agencies. These data were believed to be so critical that the external agency representatives voiced strong interest in promoting interagency partnerships so as to provide support for their maintenance. Partnerships would include identification of joint needs, cost sharing, and coordination.
4) Representatives from these three agencies recognized the power of speaking with a unified voice. These individuals confirmed that many of the science needs required by the Navy, BOEM, and DOE overlap, recognized NMFS as among the best entity in the world to provide this science, and confirmed the benefit of interagency collaboration in addressing these needs. The idea of "a new business model" whereby such interagency collaboration would be formalized with respect to protected species science, perhaps through the National Ocean Council or National Ocean Policy, was proposed and enthusiastically supported. Related was widespread frustration with the challenges associated with transferring money from one agency to another. Formalization of interagency partnerships was generally viewed as a productive step to address this problem.

5) BOEM representatives discussed their annual process for science needs identification and studies development that was similar to the PRSIPP and encouraged NMFS to consider this as a model for moving forward. The BOEM process begins in both regional and headquarters offices through an internal evaluation of science needs. High priority needs are developed into study profiles that reflect science needs of Federal Government agencies external to, as well as internal to, BOEM. These study profiles are reviewed internally by BOEM scientists across all regions, compiled, prioritized, and put out for public comment concurrent with review by BOEM's OCS Scientific Committee (FACA), after which they are revised, reviewed, and compiled into a multi-year plan of anticipated projects. A key communication mechanism identified by BOEM is the annual OCS Scientific Committee meeting; BOEM representatives encouraged participation by NMFS at these meetings.

Dovetailing the PRSIPP with Science Center and Office of Science & Technology Strategic Planning and Prioritization

Prior to the meeting, PRSIPP Steering Committee members from the SCs and S&T spoke with Center and Office Directors and Deputy Directors regarding how to best implement PRSIPP with the recently implemented NMFS Science Strategic Plans. The PRSIPP and the S&T/Center Science Strategic Plans all include identification and prioritization of science activities but the PRSIPP is a crosscutting initiative, focused on protected species science across SCs and S&T, whereas the Science Strategic Plans include all science conducted by each center/office.

NMFS science leadership was broadly supportive of the PRSIPP and viewed it as a mechanism to facilitate prioritization of protected species science at the SC/S&T level. Specific recommendations included incorporation of the SC/S&T prioritization criteria into the PRSIPP, placing high priority on fulfilling science needs of the ROs, and maintaining awareness that protected species science conducted by NMFS must fall within the agency's core mandates, even as some of that science may be conducted in response to non-NMFS science needs.

Meeting with NMFS Leadership

The PRSIPP Steering Committee met with NMFS leadership (including the NMFS Chief Science Advisor, the Directors and Deputy Directors of S&T and PR, and the NMFS Senior Economist; listed in Appendix 1) to provide an overview of the PRSIPP, recent accomplishments, and meeting results to date, and to seek feedback and recommendations for next steps. Comments and recommendations included the following:

NMFS leadership recommended that the PRSIPP should occur on several temporal cycles, depending on the primary audience and process goals. Specifically, it was recommended that SCs communicate with their respective ROs on an annual basis, that national compilation occur less frequently (on the order of once every three years), and interagency communications associated with PRSIPP would be most constructive at a three to five-year cycle.

NMFS leadership attendees were unanimously supportive of development of a SEE initiative as a joint science-management effort, based on PRSIPP accomplishments to date. Specifically, through the PRSIPP, NMFS managers have identified high-priority science, and the SEE initiative will be focused on obtaining funding for this high-priority science.

NMFS leadership stressed the importance of elevating awareness of the benefits of the PRSIPP, and the protected species science that the process strives to support, beyond NMFS. Economics was identified as an important component, and the Steering Committee was urged to incorporate this discipline.

The prioritization element of the PRSIPP (Element II) has a parallel in the NMFS fish stock assessment realm. Because a prioritization scheme for fish stock assessments is relatively well developed, it was recommended that the PRSIPP Steering Committee consider incorporating some of these approaches.

Additional Topics

Although presentations and time for subsequent discussion were scheduled to address Elements II (Prioritization), V (Performance Assessment), and the evolving PRSIPP "White Paper", the PRSIPP Steering Committee agreed that the substance of discussion with external Federal partners and NMFS leadership deserved additional time. Accordingly, addressing these additional elements of the PRSIPP was postponed to a future date.

Next Steps

A series of action items, with associated timelines and lead individuals or teams was developed as a direct outcome of the meeting (Appendix 4). Among the more significant are the following:

- NMFS should identify protected species science information needs common to NMFS management, and external Federal partners. This is a direct outcome of Element I of the PRSIPP.
- NMFS should identify existing long-term studies to address some of these core protected species science information needs. These can be regionally-focused, or can address common science needs across all regions.

- The PRSIPP should be used as a basis for development of a protected species science SEE Initiative for the FY16 cycle.
- NMFS should be the organizing catalyst to promote interagency cooperation in support of protected species science.

Conclusions

The PRSIPP is an evolving process. Of particular note are the following:

1) While the Steering Committee has identified six elements to represent a complete process (Figure 1), the order and implementation of a sequence of steps, from one to the next, may change as the committee focuses on additional elements in the future. The flowchart depicts our overall understanding of the Protected Resources Science Investment and Planning Process (PR SIPP). While each Element leads to the next step in the process, it need not occur in this rigid sequence for process execution. Prioritizing, conducting the science, messaging, or assessing performance could happen in parallel or as dictated by budgetary cycles and/or regional and national requirements.
2) Prioritization of science activities occurs at a variety of levels within the agency and on various time scales. Details regarding the extent to which prioritization will occur independently within PRSIPP have yet to be developed. Further, the term 'prioritizing' has different connotations for different people operating at the Center, Region or National level. Instead, the use of the term 'decision making' instead of ‘prioritizing’ may help address misgivings and clarify the purpose of Element 2. Realistically, selection and sorting of needs and which 'needs' get accomplished will often be dictated by necessity, e.g., funds available, lawsuits, or at-risk species. For ‘other needs' there will be several grades of decision-making driven by regional and national level tactical and strategic planning exercises. Decision-making will, therefore, be a fluid process influenced by a variety of factors and occur at variable time-scales. As external and internal 'needs' become more comprehensive and clear, a more systematic decision-making framework could be developed for long-term project execution.
3) Incorporation of economics and social science will be a focus of future efforts.

Appendix 1. Attendees of the September 2013 Meeting of the Steering Committee for the Protected Resources Science Investment and Planning Process.

Steering Committee Members (All NMFS):

Lisa T. Ballance, Chair	Southwest Fisheries Science Center
Lynne Barre	West Coast Regional Office
John Bengtson, Co-Chair	Alaska Fisheries Science Center
Shannon Bettridge	Office of Protected Resources
Kathryn Bisack	Northeast Fisheries Science Center
Mike Ford	Northwest Fisheries Science Center
Lance Garrison	Southeast Fisheries Science Center
Nicole LeBoeuf	Office of Protected Resources
Frank Parrish	Pacific Islands Fisheries Science Center
Erin Seney	Office of Science & Technology
Mike Simpkins	Northeast Fisheries Science Center
Mridula Srinivasan	Office of Science & Technology
Tali Vardi	Office of Science & Technology

External Participants:

Hoyt Battey	Department of Energy
Brad Blythe	Division of Environmental Sciences, Bureau of Ocean Energy Management
Robin Fitch	Department of Navy
Jill Lewandowski	Office of Environmental Programs, Bureau of Ocean Energy Management

NMFS Protected Species Science and Management Leadership:

Mary Colligan	Northeast Regional Office
Ned Cyr	Office of Science & Technology
David Detlor	Office of Science & Technology
Perry Gayaldo	Office of Protected Resources
Jon Kurland	Alaska Regional Office
Doug Lipton	NMFS Senior Economist
Richard Merrick	NMFS Chief Science Advisor
Mike Payne	Office of Protected Resources
Angela Somma	Office of Protected Resources
Donna Wieting	Office of Protected Resources

Appendix 2. Agenda for the September 2013 Meeting of the Steering Committee for the Protected Resources Science Investment and Planning Process.

24 September

Welcome and PRSIPP Overview

Element I Identify Information Needs

- Results and Process (science center-regional office pairs, in turn, followed by S&T and PR):

  a) What are our information needs at the Regional and National level? --synthesis (broad patterns, themes, taxonomic/geographic/disciplinary focus)

  b) How should the process of identifying information needs be structured? -- comments on template and template elements, process of gathering information (e.g., how should multiple Science Centers communicate with a single Regional Office and vice versa), desired level of granularity for problem/information need

- Next steps

25 September

External Engagement: U.S. Navy, Bureau of Ocean and Energy Management, Department of Energy

- Welcome, PRSIPP Overview, Goals of External Engagement
- Open Discussion (per trigger questions below)
    a) *What types of science needs can NMFS provide you with and how can those best be identified in an adaptive (evolving over time) framework?*
    b) *Spatial scale: How should engagement with NMFS be structured at Regional versus National levels?*
    c) *Temporal scale: How and when should engagement with NMFS be structured temporally? (e.g., annually, more frequent)*
    d) *How formalized should engagement with NMFS be?*
    e) *What other NOAA Line Offices and/or Federal Government agencies do you partner with on protected species issues? And if any, on what issues?*
    f) *How might our Federal Government Agencies capitalize on strengthened partnerships to increase support at agency leadership and congressional levels?*

Element II: Prioritization

- Dovetailing the PRSIPP with Science Center and S&T Strategic Planning and Prioritization Processes (based on discussions with science center Directors/Deputy Directors – Science Centers, in turn, followed by S&T)
- How do we proceed? For discussion: What do we want to prioritize? What criteria should be used in prioritizing? How do we allow prioritization to occur Regionally and Nationally, without conflict? Given that this element requires a dedicated workshop, what are our workshop goals?

Element V: Assess Performance

- Protected Species module for the Species Information System: update
- Discussion (per trigger questions below)
    a) *What should performance metrics inform?*
    b) *Are the data collected in the PRSIS effort likely to meet performance metric needs? If not, what is missing?*
    c) *Do we need a dedicated PR performance metric working group in addition to/instead of a dedicated workshop? (e.g., to work on standardizing reporting around the country for current and future performance metrics [both GPRA and other data oriented indicators], which ideally could contribute to the 'data portion' of the PR-SIS)*

26 September

Briefing and request for feedback: NMFS Chief Science Advisor, Director and Deputy Offices of Science and Technology and Protected Resources, NMFS Senior Economist

- PRSIPP Overview and workshop results to date
- Discussion

Briefing and request for feedback: NMFS Regional Office Protected Species Assistant Regional Administrators, Division Chiefs Offices of Science and Technology and Protected Resources

- PRSIPP Overview and workshop results to date
- Discussion – including special focus on process of information gathering for Element I

PRSIPP White Paper

- Contents, Scope, Revisions
- How to "publish" while allowing for changes
- Where should this reside and who should keep it current?

Appendix 3. Template for collecting information needs relative to protected species science: Element I of the PRSIPP.

NMFS Region / HQ (NW,SW,SE,NE,PI,AK,HQ)	**REQUIRED**
Taxon (Marine Mammals, Sea Turtles, Fish, Corals, Other-describe)	**REQUIRED**
Geographic region (e.g., LME, EEZ, other)	**REQUIRED**
Name of Complex, Species, or Population	**REQUIRED**
ESA status (Endangered, Threatened, Candidate, Proposed, Species of Concern, Delisted, Foreign, N/A)	**REQUIRED**
MMPA status (Strategic, Depleted, MMPA/not Strategic or Depleted, N/A)	**REQUIRED**
Primary theme of information need (Abundance, Trends, Life History; Stock Identification; Ecology; Threats, Health, and Condition; Recovery and Restoration; Social Science)	**REQUIRED**
Research type (data collection, data analysis, modeling, synthesis/lit review, tech. development)	**REQUIRED**
Brief description of problem or information need*	**REQUIRED**
Pending management action/dates (e.g., section 7 consultations, final rule, biop, recovery plan)*	**REQUIRED**
Consequence of inaction/insufficient data (e.g., fishery closure, bycatch thresholds reduced)*	(Optional)
Priority (Essential, High, Desirable)	**REQUIRED**
Time frame in which information is needed (≤1 , 1-3 , 3-5 , ≥5 yrs, ongoing)	**REQUIRED**
Percent funding available? (0, 1-25, 25-50, 50-75, 75-100%)	**REQUIRED**
Could this be funded by an internal/external granting organization?	**REQUIRED**
If yes, by which organization / funding program?	(Optional)
Agency/ies needing information (NOAA/NMFS, NOAA/NOS, ACOE, BOEM, DOE, Navy, Other)	**REQUIRED**
Division/ office of agency needing info. (if applicable)	(Optional)
Person/s who identified problem/information need	**REQUIRED**
Contact Information for person (e-mail address, phone)	(Optional)

* These three should answer: "I need x (information) by y (date) or else z (implications).

Appendix 4. Significant action items resulting from the September 2013 meeting of the PRSIPP Steering Committee.

- Construct a SEE Initiative for the FY16 cycle. Explicitly design as a joint science-management initiative.
- Synthesize results of workshop and discussions into an Element I Process document for publication as a stand-alone Administrative Report and for inclusion into PRSIPP white paper.
- Further develop Multispecies Cetacean & Ecosystem Assessment Survey proposal as an example of "Long Term Datasets/Baseline Studies" valued by ROs and external Federal partners.
- Initiate a process to identify protected species science needs common to NOAA and its Federal Partners (including Navy, BOEM, DOE).
- Develop a 1-page overview of PRSIPP/protected species Science to elevate awareness and enhance messaging.
- Develop economic "sound bites" to communicate the cost-effectiveness of investing in protected species science.
- Identify existing, and needed, long-term baseline studies to address core protected species science information needs.
- Act as the organizing catalyst to promote interagency cooperation in support of protected species science. Pay particular attention to improving mechanisms for transfer of funds between Federal Government agencies, and encouraging cost sharing.
- Continue to develop PRSIPP white paper.
- Consider promoting/developing working groups/workshops to identify "best practices" for protected species science.
- Implement mechanisms to ensure regular communication with external Federal partners. Identify agency points of contact.
- Use revised/polished Element I template to more formally engage with External Federal Partners to document their protected species science needs.
- Produce a preliminary and partial list of NMFS science needs.